

REMARKS

This Amendment is in response to the Office Action dated September 13, 2006.

All rejections and objections are respectfully traversed.

Claims 1-20 are currently pending.

Claim 3 has been amended to correct a typographical error.

35 U.S.C. §112 Rejection

In paragraphs 1-3 of the Office Action the Examiner rejected claims 3 and 4 under 35 U.S.C. §112, second paragraph as being indefinite.

By way of amendment, the word “a” has been added immediately preceding the first occurrence of the element “PCPI identifier” in claim 3.

35 U.S.C. §103 Rejection

At paragraph 6 of the Office Action, the Examiner rejected claims 1, 2, 11-13, 15 and 17-19 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,708,227, issued to Cabrera, et al., (hereinafter “Cabrera”).

Applicant respectfully traverses this rejection.

Applicant’s claimed invention, as defined in illustrative claim 1, is for a “method for increasing a number of persistent consistency point images (PCPIs) *maintained for a*

volume of a storage system.” The claimed invention is thus directed to increasing the number of PCPIs for a volume on a storage system.

This is in distinction to Cabrera, which teaches teaches a system utilizing a plurality of different snapshot service providers, each of which takes a snapshot of a volume.

Cabrera does teach a Volume Snapshot Service Coordinator (VSSC) that enables coordination between a backup application and the plurality of snapshot service providers. Column 8, lines 47-53. Each snapshot service provider operates to take a snapshot of a target object, which may be a volume. Column 8, lines 55-58.

Specifically, Cabrera teaches an API that “acts as a coordinator/manager of different volume snapshot providers and an administrator of snapshot providers.” Column 4, lines 34-36. The Examiner states that the API “performs equivalent operation to that of volume information block since API calls is provided, which is used to coordinate and administer multiple snapshot providers [clearly] requiring plurality of pointers configured to reference the fsinfo and PCPI fsinfo blocks.” Applicant respectfully disagrees.

Applicant’s claimed invention is directed to increasing the number of PCPIs that may be generated on a storage system. To that end, Applicant’s invention, in representative claim 1 states, in part, “providing one or more PCPI fsinfo blocks, each PCPI fsinfo block associated with a PCPI.” As noted in Applicants’ specification “[e]ach additional fsinfo block [that] is associated with a PCPI includes the inode of the inode file for the PCPI, which in turn includes appropriate inodes for active maps and the like.” Page 17, Line 29 – Page 18, Line 2. On disk, the volinfo block contains pointers to a plurality of

fsinfo blocks, including one for the active file system and fsinfo blocks for each PCPI.

Page 17, Line 17- Page 17, Line 22.

The Examiner states that Cabrera discloses PCPI fsinfo blocks because Cabrera teaches that the VSSC is used to coordinate and administer multiple snapshot service providers. Applicants respectfully traverse this characterization. Cabrera does not teach one of more PCPI fsinfo blocks. In column 5, lines 36-45, Cabrera discusses operations performed by a snapshot provide (SP), but Cabrera does not disclose any data structures utilized by SPs. Moreover, Cabrera does not disclose any on-disk structures, such as a PCPI fsinfo block that is used by a SP. As noted above, Cabrera is directed to and teaches a system that utilizes one or more SPs, but does not disclose a method for increasing the number of PCPIs for a volume nor does Cabrera disclose PCPI fsinfo blocks.


As such, Cabrera does not render claims 1, 2, 11-13, 15 or 17-19 as obvious under 35 U.S.C. §103(a).

Applicant believes that all claims are in condition for allowance and respectfully requests that a Notice of Allowance be issued.

If the Examiner believes that personal contact would expedite the examination of this matter, please contact the undersigned attorney at 617-951-2500.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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